Atty Dkt No. 10990812-4
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:
Douglas J. DELLINGER et al.

Serial No.: Unassigned — Group Art Unit: Unassigned

Filing Date: Concurrently herewith — Examiner: Unassigned

Title: METHODS OF SYNTHESIZING OLIGONUCLEOTIDES USING CARBONATE PROTECTING GROUPS AND ALPHA-EFFECT NUCLEOPHILE DEPROTECTION

INFORMATION DISCLOSURE STATEMENT

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Information Disclosure Statement submitted for the Examiner's consideration. Applicants respectfully request that the Examiner review and make of record the references identified below.

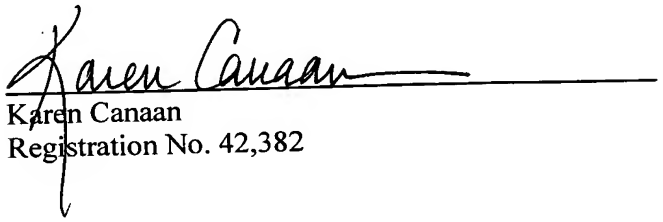
The references identified below were disclosed and/or cited in parent application Serial No. 09/756,991, filed January 8, 2001, and, as such, copies thereof are not included pursuant to the provisions of 37 CFR § 1.98(d).

A PTO-1449 form listing the references accompanies this paper. Applicants would appreciate the Examiner's initialing and returning the form to indicate that the references have been reviewed and made of record. The references are as follows:

U.S. PATENT DOCUMENTS		
Document No.	Issue Date / Publication Date	Patentee / Applicant
5,763,599	6/9/98	Pfeiderer et al.
5,861,242	1/19/99	Chee et al.
5,874,554	2/23/99	Gamble et al.
5,908,926	6/1/99	Pirrung et al.
6,147,205	11/14/00	McGall et al.

As this Information Disclosure Statement is being filed concurrently with the application, no fee is required.

Respectfully submitted,

By: 

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Substitute for form 1449A/PTO				*Complete if Known*	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*				**Application Number**	Unassigned
				Filing Date	Filed herewith
				First Named Inventor	Douglas J. DELLINGER et al.
				Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	1	of	1	Attorney Docket Number	10990812-4

U.S. PATENT DOCUMENTS							
Examiner Initials*	Cite No.	Document No.	Issue Date or Publication Date	Name of Patentee or Applicant of Cited Document	Class	Subclass	Filing Date if Appropriate
	AA	5,763,599	6/9/98	Pfeiderer et al.			
	AB	5,861,242	1/19/99	Chee et al.			
	AC	5,874,554	2/23/99	Gamble et al.			
	AD	5,908,926	6/1/99	Pirrung et al.			
	AE	6,147,205	11/14/00	McGall et al.			

OTHER DOCUMENTS — NONPATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), Title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	AF	BARON et al. (1955), "Nucleotides. Part XXXIII. The Structure of Cytidylic Acids a and b," *J. Chem. Soc.* 2855-2860.	
	AG	DEROOIJ et al. (1979), "Synthesis of Complementary DNA Fragments via Phosphotriester Intermediates," *Recueil, Journal of the Royal Netherlands Chemical Society* 98(11):537-548.	
	AH	FUKUDA et al. (1988), "Synthesis of RNA Oligomer Using 9-Fluorenylmethoxycarbonyl (Fmoc) Group for 5'-Hydroxyl Protection," *Nucleic Acids Research*, Symposium Series 19:13-16.	
	AI	HABERMANN (1962), "The Degradation of Apyrimidinic Deoxyribonucleic Acid in Alkali, A Method for the Isolation of Purine Nucleotide Sequences from Deoxyribonucleic Acid," *Biochim. Biophys. Acta* 55:999-1001.	
	AJ	HAYAKAWA et al. (1995), *Tetrahedron* 51(36):9899-9916.	
	AK	IWAI et al. (1988), "5'-Levulinyl and 2'-Tetrahydrofuranyl Protection for the Synthesis of Oligoribonucleotides by the Phosphoramidite Approach," *Nucleic Acids Research* 16(20):9443-9456.	
	AL	IWAI et al. (1988), "Synthesis of Oligoribonucleotides by the Phosphoramidite Approach Using 5'-Levulinyl and 2'-Tetrahydrofuranyl Protection," *Tetrahedron Letters* 29(42):5383-5386.	
	AM	LEHMANN et al. (1989), "Solid-Phase Synthesis of Oligoribonucleotides Using 9'-Fluorenylmethoxycarbonyl (Fmoc) for 5'-Hydroxyl Protection," *Nucleic Acids Research* 17(7):2379-2390.	
	AN	LETSINGER et al. (1967), "Oligonucleotide Syntheses Utilizing β-Benzoylpropionyl, a Blocking Group with a Trigger for Selective Cleavage," *Journal of American Chemical Society* 89(26):7146-7147.	
	AO	LETSINGER et al. (1968), "Selective N-Debenzoylation of N,O-Polybenzoylnucleosides," *Tetrahedron Letters* 22:2621-2624.	
	AP	PIRRUNG et al. (1998), "Proofing of Photolithographic DNA Synthesis with 3',5'-Dimethoxybenzoinyloxycarbonyl-Protected...," *J. Org. Chem.* 63:241-246.	
	AQ	SELIGER et al. (1985), "The p-Phenylazophenyloxycarbonyl Protecting Group: Selective Deblocking and Oligonucleotide Synthesis Avoiding Acid Steps," *Nucleosides & Nucleotides* 4(1&2):153-155.	
	AR	*Stratagene – 1988 Catalog* (1998), p. 39.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

OTHER DOCUMENTS
BARON et al. (1955), "Nucleotides. Part XXXIII. The Structure of Cytidylic Acids a and b," *J. Chem. Soc.* 2855-2860.
DEROOIJ et al. (1979), "Synthesis of Complementary DNA Fragments via Phosphotriester Intermediates," *Recueil, Journal of the Royal Netherlands Chemical Society* 98(11):537-548.
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HABERMANN (1962), "The Degradation of Apyrimidinic Deoxyribonucleic Acid in Alkali, A Method for the Isolation of Purine Nucleotide Sequences from Deoxyribonucleic Acid," *Biochim. Biophys. Acta* 55:999-1001.
HAYAKAWA et al. (1995), *Tetrahedron* 51(36):9899-9916.
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PIRRUNG et al. (1998), "Proofing of Photolithographic DNA Synthesis with 3',5'-Dimethoxybenzoinyloxycarbonyl-Protected...," *J. Org. Chem.* 63:241-246.
SELIGER et al. (1985), "The p-Phenylazophenyloxycarbonyl Protecting Group: Selective Deblocking and Oligonucleotide Synthesis Avoiding Acid Steps," *Nucleosides & Nucleotides* 4(1&2):153-155.
Stratagene – 1988 Catalog (1998), p. 39.

This Information Disclosure Statement is not intended as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any of the above references constitutes prior art to the present application within the meaning of 35 USC § 102.